E

UNITED NATIONS Economic and Social Council

Distr.
GENERAL

E/1993/68
7 June 1993

ORIGINAL: ENGLISH

Substantive session of 1993
Geneva, 28 June-30 July 1993
Item 2 (b) of the provisional agenda*

COORDINATION OF THE ACTIVITIES OF THE UNITED NATIONS SYSTEM IN THE FIELDS OF PREVENTIVE ACTION AND INTENSIFICATION OF THE STRUGGLE AGAINST MALARIA AND DIARRHOEAL DISEASES, IN PARTICULAR CHOLERA

Report of the Secretary-General

SUMMARY

The present report has been prepared in accordance with Council resolution 1993/205, in which the Council decided, inter alia, that one of the two themes to be considered by the coordination segment of the Council, at its substantive session of 1993, would be coordination of the activities of the United Nations system in the fields of preventive action and intensification of the struggle against malaria and against diarrhoeal diseases, in particular cholera.

The World Health Organization has acted as task manager in the preparation of this report, in full consultation and cooperation with the United Nations organizations most concerned (see annex).

The report presents information on malaria and diarrhoeal diseases, including cholera, and illustrates a number of issues pertaining to coordination of the activities of the United Nations system. It presents recommendations for the consideration of the Economic and Social Council that address a number of actions which are appropriate for United Nations organizations themselves but mainly focus on supporting Governments in setting priorities and acting to foster coordination among development partners, in particular those of the United Nations system.

* E/1993/100.

CONTENTS

	Paragraphs	Page
INTRODUCTION	1	3
I. OVERVIEW	2 - 28	3
A. Malaria	5 - 11	4
B. Diarrhoeal diseases	12 - 15	5
C. Cholera	16 - 19	6
D. Costs	20 - 28	7
II. EXISTING SUCCESSFUL COLLABORATIVE ACTION	29 - 69	9
A. Coordination at global and regional levels	31 - 55	9
B. Coordination at country level	56 - 69	15
III. PROBLEMS OF COORDINATION	70 - 84	17
IV. CONCLUSIONS AND RECOMMENDATIONS	85 - 114	19
A. Improving global and regional coordination	86 - 97	19
B. Improving country coordination	98 - 114	23
Annex. List of organizations collaborating in the preparation of the report		29

INTRODUCTION

1. Malaria and diarrhoeal diseases, including cholera, take a heavy toll in human life and suffering, accounting for some four million deaths and several hundred million cases each year. Their major impact is in developing countries among the men and women of the work force, pregnant women, infants and young children under five years of age and children of school age. These diseases constitute major impediments to social and economic development and improvement in the quality of life of millions of individuals, their families and their communities. They contribute in large measure to a vicious circle of disease; malnutrition - poverty - disease. They are therefore specific targets for prevention and control efforts being undertaken by Governments with the support of the international community, in particular the organizations and bodies of the United Nations system. While they are the specific and priority concerns of WHO and organizations such as the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF) and the World Bank, they also influence development policies of many other United Nations organizations.

I. OVERVIEW

2. Resources for development work available at the international level in general and to the United Nations system in particular are scarce in relation to the size of the task. Every effort is required to ensure that resources are used cost-effectively. The growing size and complexity of United Nations endeavours have increased both the importance of and the need for coordinated action. If common goals and strategies for attaining them are not agreed on and pursued, the action of one organization may well negate the benefits being provided by another. Even with agreement on common goals and strategies, unless an ethic of collaboration pervades each individual within an organization, duplication and waste will result and opportunities for synergistic and complementary action will be squandered. Coordination is therefore a priority concern for the United Nations system and other partners in development.

3. Coordination of disease prevention and control activities is obviously most important at the country level and the national authorities themselves are the most important coordinators. United Nations organizations have varying mandates but are characterized by the common goal of strengthening national capacities in ways that lead to the achievement of both national and international goals of sustainable development.

4. The case for investing in human development has been made with increasing clarity and force as population growth, environmental degradation and natural and man-made disasters have intruded on the political agendas of industrialized and developing countries alike. Particular references to this priority are included in UNDP's Human Development Report, UNICEF's State of the World's Children and the World Bank's World Development Report (devoted to health in 1993), publications developed with input from a large number of organizations.

A. Malaria

5. Malaria is most pervasive and takes its highest death toll in Africa. Some 300 million persons carry the malaria parasite: over 90 per cent of them reside in Africa. Each year, some 100 million persons experience clinical illness from this disease, 80 to 90 million of them in Africa. And each year, over one million persons die from malaria, 90 per cent of these in Africa. Most victims are children below the age of five years but they also include women with their first or second pregnancy, older children and young adults.

6. Malaria preys on populations already suffering from the effects of war, drought and famine. It has been reported as a major cause of death in refugee camps in Kenya, western Ethiopia, Malawi and Somalia but also strikes displaced persons living within their own countries. The incidence of the disease is currently increasing in Asia, especially Afghanistan; in South America, especially the Amazon region; and in those areas where the frontiers of development are being pushed back by new activities and new settlements. Multiple drug resistance of the malarial parasites has already developed and is spreading in Cambodia, Myanmar, Thailand and Viet Nam and poses a potential threat for other areas.

7. Malaria is highly debilitating. Malaria itself is a factor in land degradation and deforestation, the illness reducing work capacities to an extent which prevents inhabitants from investing the labour needed to make the land a sustainable economic resource. In areas with intense and stable malaria transmission in Africa, some 30 per cent of febrile illness is attributable to this disease. Recent studies undertaken by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in malaria endemic areas of rural Africa revealed that over a third of primary school children had had malaria during the current school term, over half of whom had had two or more attacks, typically missing a week or more of school with each attack. As a contributor to anaemia, malaria also impairs physical and mental development in young children, diminishing the returns achieved through education by restricting their potential to contribute fully to future social and economic growth.

8. Besides the erosive effect of endemic malaria, the disease also strikes in epidemic form. This may happen when previously unexposed humans enter a malaria endemic zone, as happens with migrant workers, refugees and displaced persons, or when ecological changes, including increases in breeding sites and climatic change, permit vector mosquitos to increase in numbers or to invade new areas. In epidemic form, malaria may affect all age groups in the community with high death rates.

9. In the 1950s, experts were impressed by the impact of DDT in eliminating the mosquito vectors of malaria and their enthusiasm engendered a global malaria eradication programme. This programme had significant successes in a number of areas, many of which remain malaria-free. But success was achieved in areas which generally enjoyed better socio-economic conditions or were favoured by environments less favourable to malaria transmission than the countries in which endemic malaria still persists today. In fact, in much of Africa south of the Sahara, conditions for malaria eradication were so unfavourable that eradication programmes were never even initiated. By the late 1960s, resistance of mosquitos to DDT, increasing costs and mounting opposition by household members

to periodic spraying with residual insecticides made it clear that eradication of malaria was not realistic and this was abandoned as a global goal.

10. When eradication was abandoned, many United Nations organizations and bilateral development agencies withdrew their support from national malaria programmes. This deprived many programmes of the very resources needed to implement change, often leading to highly inefficient use of available resources, especially insecticides. While global policies evolved in the ensuing years, they were not well reflected in national programmes.

11. During the 1980s, the resurgence of the malaria problem, now complicated by the growing resistance of the parasite to treatment with chloroquine and other antimalarial drugs, intensified the need for Governments for change. In 1992, the Global Malaria Control Strategy was endorsed at the Ministerial Conference on Malaria Control convened by WHO in Amsterdam. The strategy emphasizes four tactics:

(a) Provide early diagnosis and prompt treatment;

(b) Plan and implement selective and sustainable preventive measures;

(c) Detect early, contain or prevent epidemics;

(d) Strengthen local capacities in basic and applied research to permit and promote the regular assessment of a country's malaria situation, in particular the ecological, social and economic determinants of the disease.

The strategy also emphasizes the multisectoral factors which contribute to the risk of malaria and the need for multisectoral actions to prevent and control this disease. An important focus of such actions is at community level, where individuals need to be able to recognize malaria risk factors and to be empowered to take appropriate action. The difficult task of reorienting national malaria control programmes and the donor community so as to apply their resources efficiently in supporting this strategy is now under way.

B. Diarrhoeal diseases

12. Diarrhoeal diseases affect all populations consuming contaminated food or water or subject to other unsanitary conditions. They are the most common potentially fatal diseases of those living in substandard conditions.

13. Exclusive breast-feeding protects the young infant, but as soon as other fluids or food are given, infants, particularly those living in unsanitary conditions, are exposed to higher risks of contracting diarrhoea. Death from diarrhoea is frequently precipitated by acute dehydration, which can be countered by providing increased fluids found in the home or, in more severe cases, by using oral rehydration salts dissolved in water. Improved feeding during diarrhoea can help to interrupt the downhill spiral, involving infection and malnutrition, which too often is a prelude to death from diarrhoea.

14. Recent advances in the education of mothers for the prevention and treatment of diarrhoea and in making packets of oral rehydration salts available

to community health workers have contributed to the reduction of childhood deaths due to diarrhoea from more than four million in 1980 to slightly more than three million at the start of the 1990s. Despite this progress, the death toll remains unacceptable for a condition for which safe and effective interventions can be made widely available.

15. As with malaria, the prevention and control of diarrhoeal diseases requires action beyond the health sector. Mothers and other child caretakers need to be the focus of community support that enables them to improve the management of diarrhoea in the home and modify child-rearing behaviours to include exclusive breast-feeding for the first four to six months of life, increased care in providing safe food and water and improvement of personal, domestic and environmental hygiene.

C. Cholera

16. Cholera is spread like other diarrhoeal diseases but is distinguished by appearing periodically in epidemic form, for reasons which remain unclear, in developing countries of Africa, Asia and Latin America. It is spread by unsafe food or water and kills adults as well as children from rapid and overwhelming dehydration. Yet simple oral rehydration will prevent most deaths. The total number of annual deaths from cholera is not accurately recorded but certainly amounts to only a small fraction of the deaths caused by other diarrhoeal diseases. Yet, because it causes dramatic outbreaks affecting all ages and has been historically feared, cholera disrupts communities and can wreak havoc on economies dependent on tourism or international trade in foodstuffs.

17. For example, the cholera epidemic in Peru was estimated to have cost the country some US$ 70 million in lost tourist revenue during the first two months of the epidemic. Losses incurred by the fisheries industry in Peru amounted to US$ 500 million in 1991 and the Peruvian Exports Association estimates the overall loss on exports was US$ 1.3 billion. 1/ The Food and Drug Administration of the Government of the United States of America estimates the cost of its systematic testing of food products from 1 October 1991 to 30 September 1992, including fresh and frozen seafood which entered the United States of America from South and Central America, at US$ 2.2 million. Exporting countries of the region have experienced similar costs in ensuring that their exported food products are free of the cholera pathogen.

18. While Latin America has received much of the recent publicity on cholera, this disease is a more pervasive problem in Africa south of the Sahara, where cholera-related deaths are estimated to outnumber those in Latin America by a ratio of 20 to 1. Cholera also remains both an endemic and an epidemic problem in South East Asia, where disquieting news of a new epidemic caused by a previously unknown cholera organism is currently emerging.

19. The Latin American cholera epidemic illustrates the important role which interdisciplinary actions can play in protecting the health of consumers and in promoting food trade. Cholera epidemics also draw attention to the need for investments in education, sanitation and safe food and water programmes. Although catalysed by cholera, these investments have their greatest impact by

preventing sickness and death from the less notorious scourge of the other diarrhoeal diseases.

D. Costs

1. Global costs of malaria and diarrhoeal disease 2/

20. A recent estimate of the direct (mainly treatment) costs of malaria in Africa gave a 1987 figure of almost US$ 2 per case which, with 80 million cases at that time, gave an annual total of US$ 160 million. Indirect (labour time) economic losses averaged US$ 8 per case in 1987, giving a total of US$ 640 million indirect costs, and a total malaria cost (direct and indirect costs combined) approaching US$ 800 million. Given increasing severity and chloroquine resistance, these costs are projected to increase substantially by 1995 to US$ 1.8 billion, or about 1 per cent of Africa's gross domestic product.

21. Estimates of only the direct (facility-based oral rehydration therapy) cost for diarrhoeal disease in Africa, based on an average of US$ 1.00 per episode and an average of 3 episodes per child/year, of which approximately one third are brought to a health facility for treatment, give a figure of US$ 67.2 million per year. This does not include the costs of home treatment for some two-thirds of all episodes and the cost of approximately one third of episodes, which are unnecessarily treated with drugs or other ineffective remedies, at an annual cost of close to US$ 1 billion. As with malaria, however, the indirect costs tend to be still greater. In the 1991 cholera epidemic in Peru for example, total treatment costs were estimated at $29 million, with morbidity and mortality costs estimated at $260 million. Other economic losses related to this epidemic were even greater (see para. 17 above).

22. The direct cost figures provided above can only be considered as indicative estimates of the scale of the problem: very wide ranges of costs for both diseases have been estimated in the small number of available empirical investigations.

23. Information on the economic impact of disease, however, is not sufficient to identify priorities for action. For an assessment of the relative priority of the many different medical interventions (preventive and curative) currently available, it is necessary to focus on their relative cost-effectiveness. Available studies suggest that the cost per averted death from malaria ranges from a low of US$ 3 to a high of US$ 990, while the cost for diarrhoeal disease ranges from US$ 30 to US$ 244. These estimates do not address non-medical interventions, such as those pertaining to environmental management, many of which can be highly cost-effective, especially when health benefits are considered in addition to more traditional economic benefits.

24. Since the age-specific incidence and severity of malaria and diarrhoeal disease differ substantially, a measure of cost-effectiveness that more accurately compares like with like is desirable. Estimates of cost per quality-adjusted year of life saved allow a closer comparison between these two and many other disease-based interventions. The World Bank estimates that, on a global annual basis, 96 million disability-adjusted life years (DALYs) are lost to

diarrhoeal disease, over a quarter of these in Africa, while 27 million DALYs are lost to malaria, over three quarters of these in Africa.

25. The World Bank uses a figure of less than US$ 100 per DALY saved to define diseases that can be controlled substantially with cost-effective interventions. Carefully selected interventions against diarrhoea and malaria-improved domestic hygiene to prevent diarrhoea, oral rehydration therapy, use of impregnated bed-nets, and certain insecticide and vector control measures to prevent malaria - rank among the most highly cost-effective health measures available, with costs per healthy life-year gained comparable to those for measles and DPT immunization for infants. Integrated services for the management of sick children (including services for, inter alia, diarrhoeal disease and malaria) are estimated to cost between $35 and $60 per DALY saved. However, evidence on the ranges of cost effectiveness for interventions against these two diseases are very wide, indicating that resources can easily be wasted by using strategies which are suboptimal for local circumstances.

2. Agency expenditures on malaria and diarrhoeal disease control

26. The World Development Report 1993 estimates total aid flows to the health sector in 1990 at US$ 4.8 billion. This amount comprised US$ 3.9 billion of official development assistance (ODA) (US$ 1.6 billion provided through the United Nations system, US$ 1.9 billion from bilateral aid and US$ 0.4 billion from development banks) and US$ 0.9 billion of aid provided by non-governmental organizations and foundations. Although a disease-specific breakdown of these figures is not presently available, primary health care (maternal and child health, family planning, nutrition, community water supply and disease control) was estimated to account for three quarters of the total. Sub-Saharan Africa was the biggest per capita recipient region of ODA for health: external assistance, totalling US$ 1.25 billion, amounted to almost 15 per cent of total health expenditures in Africa in 1990; US$ 2.38 in per capita terms. However, both bilateral and multilateral aid flows for health declined between 1985 and 1990.

27. Total health lending by the World Bank, the biggest single funding agency, increased substantially between 1985 and 1992 and is forecast to grow from US$ 350 million in 1992 to about US$ 1 billion in 1995. Estimates by the World Bank of its malaria and diarrhoeal disease-specific lending components are on the low side, because projects are typically defined in terms of primary health care or district health systems and vary from year to year, but of total 1992 health lending, US$ 5.6 million, 1.6 per cent, was directly attributable to malaria and US$ 13.9 million, 3.97 per cent, to diarrhoeal diseases (see also paragraph 39 below). UNICEF figures for 1992 indicate, from a total health spending of US$ 228 million, approximately US$ 10.8 million, 4.7 per cent, of assistance for diarrhoeal diseases. For the 1992/93 biennium, WHO identified an annual average from regular budget and other sources of US$ 9.6 million for allocation to malaria and US$ 12.3 million to diarrhoeal diseases, out of a total annual budget of US$ 846 million.

28. Other investments are certainly being made by these and other United Nations organizations which contribute to the control of malaria and diarrhoeal disease, notably in the areas of education, clean water and sanitation,

environmental management and food safety, some of which are mentioned in section II below. The above figures, however, provide an order of magnitude estimate of the resources now being directly invested in prevention and control efforts. In relation to both the estimated economic losses attributable to these two diseases and the cost effectiveness of interventions to prevent or manage them, the present level of financial inputs by the international community seems inadequate.

II. EXISTING SUCCESSFUL COLLABORATIVE ACTION

29. In the early years of the United Nations, emphasis was placed on establishing different bodies with different mandates in different areas and with different perspectives. As they have grown in number and scope of activities, so their interdependence and need for coordination have increased. The challenge today is to ensure that coordination efforts result in greater efficiency and effectiveness for the benefit of Member States, while still allowing the flexibility needed to adapt general policies to specific local needs and promoting an atmosphere in which all are encouraged to contribute. Coordination is a means and should not be seen as an end in itself.

30. The incentive for coordination derives from the mutual benefits gained by the parties concerned, but particularly by the Member States. Its effectiveness is also conditioned by an interaction between the nature and severity of the question at hand, the strength of the Government or lead organization in question and the personalities of the individuals involved. One can recognize a spectrum of the influence of these factors in situations ranging from those where coordination has little success to those where it is excellent.

A. Coordination at global and regional levels

1. Malaria

31. With regard to malaria, FAO and WHO work together on the safe use of pesticides and insecticide resistance and jointly promote the International Code of Conduct on the Distribution and Use of Pesticides. Insecticides are also included within the International Programme on Chemical Safety (IPCS), established by the International Labour Organisation (ILO), the United Nations Environment Programme (UNEP) and WHO in 1980, a programme being further strengthened as a consequence of the United Nations Conference on Environment and Development (UNCED). The concerns which ILO and WHO share about health and safety in the workplace are reflected in their Joint Committee on Occupational Health. The problem which malaria poses for migrant workers is well recognized, although it deserves greater attention.

32. FAO, UNEP, the United Nations Centre for Human Settlements (UNCHS) and WHO jointly support the Panel of Experts on Environmental Management of Vector Control (PEEM), for which WHO provides the secretariat. PEEM promotes intersectoral action to reduce vector-borne disease transmission in the context of land and water resources development, human settlements and urbanization. PEEM is a global network permitting dynamic interactions among 45 experts in a range of relevant disciplines, 12 collaborating centres and professional staff

of the four above-mentioned agencies. In addition, malaria is strongly associated with many aspects of the environment that preoccupy UNEP, including deforestation, settlements and toxic chemicals. Most UNEP financial support aimed specifically at the control of malaria and cholera has gone into joint activities with WHO.

33. The United Nations Development Programme (UNDP) and the World Bank both support research coordinated by WHO (see para. 48 below). UNDP has placed a particular emphasis on human development, its multisectoral perspective and institutional coordination. Both UNEP and UNDP have actively supported training programmes in malaria control, staff training and operational research. UNDP has supported a 10-year programme for monitoring malaria drug resistance in the South-East Asia region of WHO and provided critical support for a 1991 interregional conference on malaria in Brazzaville that became a turning point for malaria control in Africa. An FAO/UNDP/United Nations Industrial Development Organization (UNIDO)/WHO regional network on pesticides has been established for Asia and the Pacific.

34. UNESCO is particularly concerned with the impact of ill health, including malaria, on primary school education and has joined UNDP, UNICEF, the World Bank, WHO and others in establishing a Global School Health Initiative to address this issue.

35. Because of shared concerns over the health of mothers and children, UNICEF and WHO have developed particularly close working relationships. These are reflected in the Joint Committee on Health Policy, which is composed of members of the UNICEF and WHO executive boards and meets at least every second year to review and discuss health policies and collaborative activities.

36. Malaria has been an area of joint collaboration between the two organizations since their inception. UNICEF was a major contributor to the malaria eradication programme before that effort was halted. UNICEF then withdrew its support for some years but has recently become more active, particularly in Africa, where it focuses on the provision of effective drugs and the promotion of personal protective measures, such as impregnated bed-nets.

37. UNIDO supports national industries manufacturing products relating to malaria and diarrhoeal diseases, including pesticides, anti-malarial drugs and oral rehydration salts. UNIDO participates in the Regional Network on Pesticides for Asia and the Pacific (RENPAP), a resource which could be more fully exploited with respect to pesticide production for malaria control.

38. The World Bank is the largest lender for health in developing countries. It is also the largest contributor, outside the countries themselves, to the prevention and control of malaria and diarrhoeal diseases. The Bank's support for malaria control stems from its recognition of this disease as a major public health problem in many of its borrower countries and as a development-related disease with links to road-building, new agricultural settlements and irrigation projects. World Bank lending for malaria control has grown significantly since it was initiated in the early 1970s but has fluctuated from year to year. In 1989, the Bank approved US$ 120 million in loans for malaria control, the highest amount to date. This figure declined to US$ 10 million in 1990, but the number of new projects with malaria control components has grown steadily. In

addition, emergency situations - mostly malaria epidemics - have spurred efforts by the Bank to include support for malaria control in other loans and projects. The Bank also supports malaria research through its contributions to and co-sponsorship of the Special Programme for Research and Training in Tropical Diseases (TDR).

39. Through the provision of food aid, the World Food Programme (WFP) supports a number of health and environmental activities that bear on malaria and diarrhoeal diseases, including land development and settlement schemes and forestry and fishery development. This aid is used as budgetary support; as an incentive for increased participation by specific target groups, such as pregnant and nursing women or preschool children, in health services such as training or performing community service, and as nutritional support, for example in nutritional rehabilitation or for hospital patients. Approximately US$ 40 million of current WFP commitments are specifically devoted to environmental health activities, such as the provision of potable water and the improvement of sanitation facilities. The Food Aid Programme in WHO, entirely financed by WFP, serves as the health adviser to WFP and is closely linked to project design, planning and evaluation, with the aim of maximizing the positive and minimizing the negative health effects of development activities supported by food aid.

2. Diarrhoeal diseases including cholera

40. FAO contributes to the control of diarrhoeal diseases through the promotion of food quality and safety along the food chain and the application of good agricultural and manufacturing practices. FAO is the leading technical agency in promoting food trade and the most experienced in providing assistance in food control to countries. It collaborates with WHO on issues of food safety and improved nutrition and serves as the secretariat for the FAO/WHO Codex Alimentarius Commission. During the cholera epidemic affecting Latin America, FAO was the leading technical agency providing assistance with the prevention and control of food contamination at both domestic and import/export levels, and during 1991 and 1992 it approved a special technical assistance programme to support the development of national food control infrastructures at a cost of US$ 3 million. FAO contributions also include support to improve the quality of irrigation waters in agricultural production.

41. UNDP contributes to the control of diarrhoeal diseases through its extensive support for water and sanitation projects. It supports a major collaborative mechanism, the Collaborative Council for Water and Sanitation, whose secretariat is based in WHO. Members of the Council include United Nations organizations, bilateral development agencies and developing countries with responsibilities in these areas. The Council meets every two years, serving as a forum for sharing information and improving coordination. Its work is supplemented by that of six working groups, which generally meet on an annual or biennial basis.

42. Diarrhoeal diseases are a major cause of death in refugee populations. The Office of the United Nations High Commissioner for Refugees (UNHCR) and WHO, together with the International Federation of Red Cross and Red Crescent Societies, are currently preparing a practical guide to environmental health

management in disasters and emergencies and, together with selected non-governmental organizations, are preparing guidelines for the treatment of diarrhoeal illnesses, including cholera and dysentery, in refugee and displaced populations.

43. Diarrhoeal diseases have been a major focus for UNICEF/WHO joint action at global and regional levels since the creation of the WHO Diarrhoeal Disease Control Programme in 1978. UNICEF is the largest global supplier of oral rehydration salts. It emphasizes the control of diarrhoeal diseases in programmes relating to breast-feeding, nutrition and the supply of essential drugs. In 1992, it used high level advocacy in drawing attention to the importance of the control of diarrhoeal diseases at meetings of the Organization of African Unity in Dakar, the Arab League in Tunis and the South Asia Association for Regional Cooperation in Colombo.

44. UNICEF is committed to the long-term goal of universal access to water and sanitation by the year 2000. It also supports the subsidiary goals of linking water and sanitation with the control of diarrhoeal diseases, providing a supply of safe water as a complement to health education in areas affected by guinea-worm and programming water and sanitation in a sustainable manner, taking into account environmental concerns. Emphasis is being placed on capacity-building of Governments and communities, particularly empowering women to play a more active role in sector activities and realize greater health and socio-economic benefits from these investments. In 1992, UNICEF cooperated with 90 countries in water and sanitation projects, with a financial input of approximately US$ 120 million, including both regular and emergency programmes.

45. UNICEF and WHO have agreed on common policies for the control of diarrhoeal diseases and recently adopted common monitoring indicators. In addition, UNICEF and WHO have begun to develop a joint strategy for the promotion of hygiene education in water supply and sanitation. Within the region of the Americas, UNICEF has joined the Pan American Health Organization (PAHO) and USAID to form, at both regional and country levels, inter-agency coordinating committees to promote common objectives, strategies and policies for the control of diarrhoeal diseases, PAHO acting as the permanent secretary for the regional-level committee. UNICEF is also active in other regions in supporting training and evaluation relating to the control of diarrhoeal diseases. UNICEF and WHO are currently pursuing an initiative to promote the integrated management of the sick child, which seeks to develop a uniform approach to the treatment of the most important causes of childhood mortality, including malaria and diarrhoeal diseases.

46. In Latin America, national cholera commissions, established to coordinate and implement national prevention and control plans, are comprised of representatives from Government, the private sector, the community, non-governmental organizations, bilateral and multilateral development agencies and United Nations organizations. The latter include FAO, the International Atomic Energy Agency (IAEA) (to coordinate research on food irradiation as a public health measure for controlling food-borne diseases), the Inter-American Development Bank (IDB), UNDP and the Office of the United Nations Disaster Relief Coordinator (UNDRO), in addition to UNICEF, the World Bank and WHO. In Africa, strong collaborative ties exist between United Nations organizations, bilateral development agencies, non-governmental organizations and national

Governments in responding to the cholera epidemics which continue to plague this continent. In the Western Pacific, close collaboration between UNICEF and WHO exists in controlling cholera, which is being approached within the general context of control of diarrhoeal diseases. All endemic countries in the region have prepared plans for controlling cholera outbreaks and a regional task force on cholera control has been established.

3. Research and development

47. WHO serves as the executing agency for the Special Programme for Research and Training in Tropical Diseases (TDR), co-sponsored, with WHO, by UNDP and the World Bank. Malaria research, from field-based evaluations of the effectiveness of insecticide-impregnated bed-nets to laboratory investigations for developing malaria vaccines, accounts for a major portion of Programme expenditures. UNICEF also supports malaria research, particularly on issues pertaining to the empowerment of individuals and communities. Other research collaboration is occurring through PEEM (see para. 33 above).

48. WHO coordinates basic and applied research related to the prevention and control of diarrhoeal diseases, including cholera, which is financed in part by UNDP and UNICEF. This includes research on the composition and use of fluids used for oral rehydration and on preventive interventions, including developing and testing vaccines against cholera and other diarrhoeal diseases. These organizations, along with bilateral donors, also support the International Centre for Diarrhoeal Diseases Research, in Bangladesh. FAO promotes practical research associated with improved technologies for the production and storage along the food chain of safe and nutritious products.

4. Prevention and control

49. In collaboration with other relevant United Nations organizations, WHO develops global policies and strategies for disease control; provides active support to countries for planning and implementing control programmes; takes part in mobilizing resources; and disseminates training materials for adaptation by national programmes.

50. WHO has coordinated the development of the Global Malaria Control Strategy mentioned in paragraph 11 above, with contributions from United Nations organizations, including UNDP, UNICEF and the World Bank. The Ministerial Conference on Malaria that endorsed the Strategy received the support and participation of these same organizations and a large number of non-governmental organizations.

51. The WHO Global Task Force on Cholera Control has developed guidelines for the formulation of national policies on cholera control which have been widely disseminated and used. They include advice on cholera surveillance; treatment and control of international spread; tourism in affected areas; food safety at both domestic and international trade levels; and water and sanitation. UNICEF is an observer on this Task Force and contributed to the development of a joint UNICEF-WHO proposal for funding and collaborating while implementing cholera-control activities in various countries.

52. Two other recent major international meetings that promoted wide-scale collaboration and coordination and were relevant to the prevention and control of malaria and diarrhoeal diseases were the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992, and the FAO/WHO International Conference on Nutrition (ICN), held in Rome in December 1992. UNCED's Agenda 21 3/ has provided a comprehensive blueprint for multisectoral action which is now being addressed. ICN endorsed the World Declaration and Plan of Action for Nutrition, 4/ which includes specific reference to the actions necessary to provide for safe food and water and strongly recommends a coordinated and cooperative national action plan for carrying out the recommendations. FAO and WHO, along with other United Nations organizations, have agreed to continue to strengthen the excellent collaboration already established in convening the ICN.

53. Two further meetings in recent years were also important events. The first was the World Conference on Education for All, held in Jomtien, Thailand, in March 1990 and sponsored by UNDP, UNESCO, UNICEF, the World Bank and WHO. The World Declaration on Education for All, 5/ an outcome of the Conference, reaffirmed the fundamental importance of healthy child growth and development and highlighted the importance of life-skills education through both formal and informal education programmes, in areas such as nutrition, population, agriculture, family life and other societal issues. Controlling malaria and diarrhoeal diseases is an integral part of such education.

54. The second meeting was the 1990 World Summit for Children, which, in its Action Plan, 6/ adopted a number of health goals previously endorsed by the World Health Assembly to be achieved by the year 2000. These included specific goals for reducing disease and death from diarrhoea as well as goals pertaining to water, sanitation, nutrition and education, the achievement of which will contribute to the prevention and control of both malaria and diarrhoeal diseases. UNICEF and WHO continue their active collaboration in support of the Summit health goals, particularly in developing joint indicators to monitor national and global progress in achieving them. UNDP, UNICEF, the World Bank and WHO also co-sponsor, with the Rockefeller Foundation, the Task Force on Child Survival and Development, which is concerned with promoting the achievement of health-related Summit goals.

55. Facts for Life provides another example of successful collaboration. This publication presents information which every individual, household and community is entitled to. It was produced by UNICEF in collaboration with UNESCO and WHO and includes chapters on malaria and diarrhoeal diseases. It also reflects the United Nations commitment to spread its collaboration as wide as possible, as indicated by the long list of advisers who acted as consultants on the text and the even longer list of non-governmental organizations who are partners in the Facts for Life initiative.

B. Coordination at country level

56. Country-level activities of United Nations organizations relating to the prevention and control of malaria and diarrhoeal diseases are too numerous to describe in detail, and only some examples are given here.

57. FAO has specifically addressed malaria concerns in its support for irrigation schemes in, for example, Benin, Mali, Niger and Peru. As part of its overall food control programme, FAO assists Guatemala and other Latin American countries in the implementation of good practices for the preparation and storage of foods in refugee camps.

58. From 1987-1991 UNDP provided support to strengthen malaria control in Bangladesh, concentrating on the development of health manpower at the district and Thana health levels and operational research.

59. UNICEF supports malaria control, particularly at community level, mainly through advocacy and training and the provision of anti-malarial drugs, insecticide impregnated bed-nets and educational materials. Cooperation in malaria control exists between UNICEF and WHO in 17 countries in Africa south of the Sahara.

60. UNICEF and WHO frequently join together to support national diarrhoeal disease control programmes in training, planning, communication activities, monitoring and evaluation. UNICEF has been a leading promoter of the national production, provision and use of oral rehydration salts as well as home-based fluids. UNICEF supports diarrhoeal disease-control activities in 64 countries. UNICEF and WHO also actively collaborate at country level on water supply and sanitation programmes in, for example, Botswana, Burkina Faso, Mozambique and Zambia.

61. UNIDO is providing support to Myanmar for a pesticide formulation plant. It has assisted countries in the past with the production of quinine and could renew this support if additional supplies of quinine are needed. UNIDO is supporting Viet Nam in the production of the anti-malarial drug artemisinin and has received a request for similar support from Myanmar. In Rwanda, UNIDO and UNDP have supported the processing and refining of pyrethrum. UNIDO is currently promoting the sales of pyrethrum on the international market in Africa, where some 10,000 families are estimated to earn their living from its production.

62. UNIDO has provided support to several countries for the production of packets of oral rehydration salts, as well as supporting Algeria with a pilot plant for intravenous infusions. Since 1991, UNIDO has collaborated with UNDP, UNICEF and WHO in fielding missions to Central Africa to explore the possibilities of controlling cholera by examining the quality of groundwater and drinking water, UNIDO's particular interest being in the use of long-life and slow-release bacteriocidal agents to inactivate cholera bacteria in wells and other sources of drinking water.

63. Over the last decade, the World Bank has financed some 10 projects with major malaria control components in such countries as Bangladesh, Brazil, India, Indonesia, Madagascar, the Philippines and Sao Tome and Principe. The most

important project, which was developed in cooperation with WHO and PAHO, was the Brazil Amazon Basin Malaria Control Programme, costing some US$ 100 million. As an innovation in malaria control, the project adjusted its approach in each of three distinct epidemiological settings: mining, colonization and peri-urban areas. The results have been positive and overall malaria prevalence in Amazonia has started to decline. Under its new policy on the Environmental Aspects of Dam and Reservoir Projects, the Bank assesses the health effects of dams and reservoirs, malaria often being a major consideration. Substantial diarrhoeal disease-control components are included in the large World Bank development programmes in Bangladesh and India.

64. WFP supports a slum improvement programme in Santo Domingo, Dominican Republic and other major towns which have inadequate clean water and sanitation. Food aid is provided as an incentive for some 100,000 poor families living in project areas to participate in activities organized on a community self-help basis, in collaboration with a number of non-governmental organizations which are providing engineers, architects and voluntary social workers. One of the most important benefits of the five-year project should be a reduction in the very high incidence of diarrhoea and other enteric diseases. In Peru, 21,000 families are receiving WFP assistance to improve potable water supplies and sanitation facilities for reinforcing cholera control efforts. In Sri Lanka, food aid is used to compensate poor people for the loss of a day's earnings, which are foregone in order to attend courses that emphasize upgrading the skills of selected adult participants, so that they can spread health and nutrition information when they return to their villages.

65. UNHCR and WHO have closely coordinated their efforts, notably in Bangladesh and Southern Africa, to help local authorities prevent and control diarrhoeal diseases, including cholera. Under the umbrella of the United Nations Coordination Agency for Afghan Refugees (UNOCA), UNHCR and WHO collaborate with other United Nations organizations and non-governmental organizations in Operation Salaam, a broad effort to improve conditions of Afghan refugees in Pakistan and Iran. In Iran, UNHCR has provided supplies for malaria control.

66. In Cambodia, the repatriation of over 300,000 refugees and the resettlement of close to 700,000 persons within the country are compromising the country's ability to control malaria. FAO, ILO, UNDP, UNESCO, UNHCR, UNICEF, the World Food Programme (WFP) and WHO are all collaborating in reintegrating refugees and displaced persons. The United Nations Border Relief Organization (UNBRO) has closely collaborated with WHO in addressing the problem of treating multi-drug-resistant malaria in the refugee camps in Thailand which border Cambodia, and staff of the two organizations have worked together with the Thai malaria control programme to develop common policies.

67. Malaria epidemics are known risks in Afghanistan, Djibouti, Ethiopia, Madagascar and Namibia. At the request of Ethiopia, UNDRO, UNHCR, UNICEF and WHO are collaborating to prevent and control malaria epidemics in areas disrupted by civil war or faced with the problem of repatriating refugees. A plan for the control of malaria in high-risk areas and populations has been developed and drugs and insecticides have been purchased. In Madagascar, the World Bank and WHO have agreed on common policies for malaria control but political instability of the areas most at risk from epidemics has impeded the effectiveness of the support offered.

68. For the past two years the World Bank, WHO and the Government of the Lao People's Democratic Republic have cooperated to review and replan the national malaria control programme, resulting in a long-term loan to the Lao People's Democratic Republic, including funds for malaria control. UNICEF is also cooperating with WHO and the Lao People's Democratic Republic in malaria control and in 1990 UNICEF and WHO collaborated with the Government to hold the first national malaria meeting. This will be repeated in 1993.

69. In Zambia, UNICEF and WHO have collaborated with the World Bank Education Rehabilitation Project to introduce school health education and people's participation as a way to rehabilitate existing schools and build new schools in cholera-affected areas in selected districts, and all three organizations helped the Government to develop both short-term and long-term development plans in response to their recent cholera epidemic.

III. PROBLEMS OF COORDINATION

70. Section II of the report has highlighted successful collaboration efforts. However, problems do exist, at global, regional and country levels, and they affect the spread of malaria, diarrhoeal diseases, cholera and other communicable diseases.

71. Various factors contribute to these problems, partially differences in the perspectives of different United Nations organizations, such as different perceptions of the complex linkages between economic and social development activities. For example, in the past, organizations have often invested in projects promising attractive economic returns which were, however, diminished by negative health impacts.

72. Low priority has been given to investments in safe water and sanitation, since there may be few commercial incentives. The savings which they would bring in terms of reduced rates of diarrhoeal deaths, prevention of cholera epidemics and improved long-term development are not being adequately valued in the short term.

73. Not enough attention has been given to providing a clear framework for development policies that would guide investments made by different sectors and ensure that their expected returns would be judged not only within the sector itself but also by the returns expected on the larger goal of healthy, sustainable development. Significant progress in such policy development is now being made, however, as illustrated by the recent international conferences referred to earlier (see paras. 51-55 above), as well as the Secretary-General's focus on the interrelationships between peace and development and the forthcoming World Summit for Social Development, to be held in Copenhagen in March 1995.

74. Coordination difficulties are further aggravated by differences in the regional groupings of countries employed by different United Nations organizations, different locations of regional offices and different programming cycles.

75. Resource constraints have also impeded coordination efforts. The observation that the malaria eradication programme did not succeed in eradicating malaria but did succeed in eradicating malariologists is true not only of malariologists but also of the resources devoted to eradicating the disease in recent years. The utilization of those scant resources also poses problems: attention is directed to the acute symptoms of epidemic malaria but action to remedy the underlying problems of socio-economic development is far less often taken.

76. Similarly, for diarrhoeal diseases and cholera, additional global and regional resources are mobilized to combat epidemics but are often used only for immediate response activities and are withdrawn when the epidemic subsides, setting the stage for further epidemics.

77. Where epidemics, especially cholera, are concerned, political and economic considerations frequently move to the forefront and result in measures such as quarantine, cordon sanitaire, and other restrictions of movement and economic activity being instituted over the objections of technical advisers.

78. Evolution of the United Nations system itself is providing additional challenges for coordination. For example, nutrition units (important to disease control) have been found necessary in FAO, UNICEF, the World Bank and WHO. Coordination of country support by such units is of critical importance, in order to avoid having legitimate differences of expert opinion and organizational perspective risk subjecting a country to differing and perhaps conflicting advice from the United Nations system.

79. Issues pertaining to water and sanitation do not usually fall within the responsibilities of ministries of health and inter-ministerial collaboration is weak in many countries. Thus, for example, schools often suffer from lack of adequate sanitary facilities; municipalities, on which many problems related to malaria and diarrhoeal diseases are focused, are generally managed autonomously and may have more resources per capita available for investment than the national Government, so that coordination at the national level can be difficult. Ministries of health themselves are often not strong in providing coordination within Governments and they infrequently advocate narrow medical-care perspectives which favour cure over prevention and the urban rich over the rural poor.

80. Prevention and control of malaria and diarrhoeal diseases require intersectoral collaboration, especially at the community level. Personal beliefs and customs, poor quality of the health services, ineffective and unrealistic treatment policies and social and economic barriers may prevent people from seeking treatment. Many health facilities lack appropriate drugs and those available on the open market risk being inappropriate, counterfeit, or both.

81. An important segment of the population is served by the private sector. It is a major challenge to coordinate the private with the public sectors, in order to ensure adherence to appropriate treatment recommendations, using drugs of known efficacy which are potent at the time of use, particularly as these standards may not be met in the public sector itself.

82. Lack of understanding about the role of food-control measures in the prevention and control of diarrhoeal diseases impedes effective intersectoral action. Comprehensive national response requires substantial involvement by ministries of health, education, agriculture, environment, water, urban development, finance and planning. To the extent that each of these ministries relates to a different agency within the United Nations system, the problem of United Nations coordination is compounded.

83. The main problems which arise in malaria or cholera epidemics relate to early warning and the ability of coordinating organizations, including WHO, to react promptly in mobilizing both technical and financial resources. Reports are often received only after the epidemic is well established, reducing the impact of any remedial action. This emphasizes the need for epidemic preparedness, including the availability of sufficient reserve funds to permit rapid response to emergencies. Emergency situations also occur in areas of political unrest, which may reduce the ability of the Government to cooperate fully or restrict the access of governmental programmes into affected areas. Under these circumstances, close cooperation between several United Nations organizations may be mandatory.

84. Coordination problems tend to be the most severe in countries with the weakest managerial infrastructure. This places the United Nations organizations in a difficult situation. Strengthening national capacities is a generally shared goal and no organization interested in sustainable development would wish to undermine national responsibility by taking international action that imposes coordination from the outside, because the country itself lacks either the capacity or the willingness to do so. Nevertheless, particularly in emergency situations, such action may sometimes be required.

IV. CONCLUSIONS AND RECOMMENDATIONS

85. Under the initiative and guidance of the Secretary-General, far-reaching reforms are evolving within the United Nations system, many specifically aimed at increasing effective coordination. The recommendations in this report focus on what can and should be done now within organizational structures and relationships as they exist, using very specific examples of coordination in the prevention and control of malaria and diarrhoeal diseases, including cholera. These recommendations are likely to remain relevant even as more fundamental reforms are introduced.

A. Improving global and regional coordination

86. Global and regional coordination can and should be intensified or improved in a number of specific ways, as recommended below.

1. Broad policies for development

87. Efforts should continue to define broad policies for development which ensure that investments by specific sectors contribute not only to development within that sector but also to the overall goal of healthy, sustainable development. All United Nations organizations should participate.

2. Leadership and lead agencies

88. The strength of lead organizations within a sector and the ability of those organizations to collaborate with other concerned organizations is paramount. In combating malaria and diarrhoeal diseases strong technical and managerial leadership is required, particularly as the marked increase in the investments now being made by the United Nations as a whole in human development has increased the number of activities which relate to the prevention and control of these diseases. In order to prevent, monitor and control food contamination as an important strategy for reducing diarrhoeal diseases, FAO should be supported in its technical cooperation role. The Panel of Experts on Environmental Management of Vector Control (PEEM) should be supported in assessing the vector-borne disease impacts of land and water-resource development and human settlement projects, and in providing advice on the design of environmental management measures to minimize the risks of vector-borne disease transmission. WHO should ensure that it maintains an adequate staff of disease prevention and control experts whose calibre is of a standard that commands widespread respect. Enhanced technical leadership in these fields should facilitate the investment by other United Nations organizations in expertise which is complementary to theirs.

3. Research

89. WHO is providing leadership in the area of research and development but there is a need to expand efforts in these critical areas and continue the search for vaccines; drugs for treatment; approaches to environmental management which both reduce or eliminate pathogens and create unfavourable breeding conditions for mosquitos and other vectors of disease; and other effective tools which will improve the prevention and control of these diseases. Additional investments are also needed by WHO and other involved organizations, including UNDP, the World Bank and UNICEF, in order to clarify sociocultural factors which either promote the transmission of these diseases or inhibit the effective application of available control tools. This research extends from the laboratory bench, where medical science dominates, to the community, where multisectoral issues pertaining to environment, living standards, culture, education and beliefs dominate. It is complemented by research being carried out in other sectors, including that of FAO, which seeks to improve technologies for the production and storage of safe and nutritious food. WHO and the other organizations involved must share their vision of the importance of research and development related to these and other diseases. They must seek to obtain the investment of the resources needed to ensure that an appropriate balance is maintained between applying existing knowledge and acquiring new knowledge.

4. Information

90. There is not enough information available on how the prevention and control of malaria and diarrhoeal diseases contribute to the objectives of the various organizations whose support is required. An immediate step would be for all organizations to increase the exchange of information on the problems of malaria and diarrhoeal diseases, in order to ensure that the relevant decision makers in each organization are accurately informed about the health and development threats posed by these diseases, the actions to address these problems which the organization in question should take and the means of assessing the appropriateness and impact of such actions through monitoring and evaluation.

91. This information exchange must also include non-governmental organizations, which are providing an ever more important complement to actions undertaken through the United Nations system and by Governments. Non-governmental organizations are often the first on the scene when disaster strikes and may provide the only channel for epidemic prevention and control measures in areas which are not politically secure. All United Nations organizations need to continue and expand their efforts to ensure that relevant non-governmental organizations are fully informed of the resources of the United Nations system at global, regional and country levels and that the staff of non-governmental organizations are offered specific training, as required, on the technical aspects of disease prevention and control.

92. To promote improved information exchange, WHO will convene a Malaria Advisory Group during 1993, to which will be invited relevant United Nations organizations, bilateral and multilateral development agencies and non-governmental organizations. The Group will monitor progress in malaria control and serve as a forum for exchanging information and promoting collaborative action, including resource mobilization. It will help in the evolution of the WHO plan of work for malaria control 1993-2000, in order to ensure that the plan appropriately addresses the need for multisectoral efforts, and the Group will itself help to promote those efforts. Several mechanisms for information exchange already operate within the area of diarrhoeal disease control, including annual meetings of a technical advisory group of international experts, a meeting of interested parties involving donor groups, and global and regional task forces on cholera control. Further encouragement should be given to including managers of food-control programmes in meetings and committees concerned with the control of diarrhoeal diseases. Mechanisms for promoting further information exchange and collaboration in the areas of prevention and control of both malaria and diarrhoeal diseases, focusing especially on the United Nations system and non-governmental organizations, will be explored by WHO.

93. As additional steps, efforts will be made to promote the use throughout the United Nations system of the expertise available in the PEEM network for the health impact assessment of all natural resources development projects. The technical discussion during the March 1994 PEEM meeting will focus on incorporating a health component into integrated river basin development and management. The subject of epidemic/communicable diseases, including malaria and cholera, and their relation to the workplace, will be suggested as a possible topic for inclusion in the 1994 session of the joint ILO/WHO Committee on Occupational Health. A WHO Collaborating Centre in Finland is already

responsible for coordinating international activities concerning worker's health and new epidemics in the workplace; the appropriateness of including malaria and cholera within its mandate will also be explored.

5. Early-warning systems

94. Mechanisms for early warning, prevention and control of epidemics must be strengthened within the various bodies concerned with disaster relief, including the Department of Humanitarian Affairs, UNDRO, UNHCR, UNICEF, WHO, and several non-governmental organizations. FAO, UNEP and WHO should use existing mechanisms for monsoon forecasting as a basis for developing methods for forecasting malaria epidemics. The United Nations system should increase its efforts to further develop early warning systems for emergencies such as drought, famine, political instability and other causes of mass population movements which are a major risk factor in the occurrence of malaria and cholera epidemics. Development bodies such as UNDP, the World Bank and bilateral development agencies should be sensitized to the existence of emergency-prone areas for malaria and cholera, so that these areas can be included within packages of emergency relief assistance.

6. Balancing investments

95. A more difficult question is how much additional investment by the United Nations is appropriate for preventing or controlling these diseases, given urgent competing needs, such as HIV, tuberculosis, immunization and micronutrient malnutrition, to cite only a few alternative needs within the health sector alone. For each of these problems, balance must be struck between the effectiveness of investments narrowly made for specific disease interventions (for example, drug therapy for malaria or case management for diarrhoea) and the effectiveness of broader investments in infrastructure (for example, specific health infrastructure investments, such as training of health staff, strengthening epidemiological surveillance and rehabilitation or construction of health facilities; or broader investments, in areas such as food safety, water, sanitation, primary education or education of mothers). The appropriate level of resources, as well as the balance between narrow and more general investments, will differ in each country, underlying the need for effective country-level decision-making. However, global and regional coordination of resource allocation is also important, because the problems of drug-resistant malaria or epidemic cholera which affect one country have the potential for regional and global spread if not contained. Concerned organizations should continue to develop together plans for collaborative action to address specific problems at global and regional levels, in an effort to provide a better foundation for making appropriate decisions on resource allocations at these levels.

7. Monitoring progress

96. An important approach to better communication and resource allocation lies in the further strengthening of national and global monitoring systems for malaria and diarrhoeal diseases. UNICEF and WHO collaboration in developing and using a joint set of indicators for monitoring global progress towards a number of health or health-related goals should be strengthened while guidelines for monitoring progress in malaria control should be rapidly revised in the light of the recently adopted Global Malaria Control Strategy (see para. 11 above). The prospects for using intersectoral information systems, as called for by Agenda 21 of UNCED, should be explored as a way to improve the exchange of information relevant to improving the epidemiological understanding of malaria and cholera transmission. In the case of food control associated with the prevention and control of diarrhoeal diseases, close consultation with FAO is required.

97. The personalities of individual participants have an important influence on the level of coordination which can be achieved. At global and regional levels, it is important that relevant organizational heads play an effective role in advocating and implementing action supporting sustainable world development. It is particularly critical that the Secretary-General exercise all the powers of persuasion at his command to strengthen an ethic of coordination throughout the United Nations system in order to oppose the idea that all individuals and organizations have to pursue their own objectives, whether or not at the expense of the common good.

B. Improving country coordination

98. Problems of country-level coordination have been related to weaknesses of government coordination mechanisms, the dispersion of responsibilities relating to health among different ministries, the autonomy of large cities and resource constraints. In recognition of the need to continue efforts to strengthen government management capacities and to increase resources in the medium term, some short-term actions can be taken to mitigate the effect of these problems.

99. The United Nations organizations themselves should promote the formation of country-level coordinating groups, convened by the host Government, comprised of concerned United Nations organizations and including, where applicable, bilateral development agencies, non-governmental organizations, consumers and the private sector. Multisectoral representation from the Government should be promoted to facilitate collaboration between different ministries. Municipal representatives should join such coordinating groups as well as form their own groups to interact with those at national level. These groups could be disease or problem-specific or could be more generally concerned with development, augmented by problem-specific subgroups, depending on the national situation. The resident coordinator of the United Nations system should be the major facilitator for these groups.

100. Disaster preparedness and response, addressed in several countries through the formation of coordinating groups of concerned organizations, should be further promoted, both as a part of a larger coordinating group (as proposed above) and also for disasters specifically. Epidemics of malaria, cholera and

other diseases have not featured prominently in the work of disaster preparedness and response groups. Yet such epidemics frequently accompany natural and man-made disasters. The concerned organizations need to be fully sensitized to this fact and epidemic prevention measures should be a feature of emergency responses from the inception of such groups.

101. As useful as these national coordinating groups may be, there remains in many countries the need for a strong United Nations technical focus to support the country as it implements, monitors and evaluates its programmes. This is particularly critical in disaster situations which weaken the country's own capacities for response. For many of the issues pertaining to the prevention and control of malaria and diarrhoeal diseases, the technical focus should be provided by WHO. WHO should provide sufficient support to its country offices so that they can fulfil this role and help mobilize the support required from other organizations to achieve health goals in the context of more general socio-economic development. In the case of food-control measures, a joint FAO/WHO technical focus should be encouraged.

102. Further efforts are needed within countries to reinforce the synergism between health and education. Health professionals are becoming more aware of the importance of education in maintaining good health. Teachers are also becoming more aware of the roles they can play in using education for better health. But far more should be done. UNESCO has noted the importance of primary schools for this purpose and the particular need for greater collaboration between the schools and community health centres. Health personnel should make additional efforts to contact teachers and work with them in strengthening the role of schools in public health, including the provision of adequate water and sanitation facilities, the promotion of food safety, the referral of pupils for treatment and support for community-wide education relating to disease control programmes.

103. It is crucial that individuals at risk receive very specific messages related to the prevention of malaria and diarrhoeal diseases and their early recognition and treatment. Much remains to be done, however, to develop effective programmes for communicating these messages and for promoting the active support of individuals and communities in disease prevention and control activities. The collaboration of UNESCO, UNICEF and WHO in producing Facts for Life has been an excellent initiative in this area. In addition, UNDP, UNICEF and WHO have together identified a minimum complex of hygiene behaviours affecting diarrhoeal morbidity, which is now being incorporated into school health programmes. Yet much more needs to be done, especially in schools. Health teaching in primary schools, if it exists at all, does not generally provide practical information that permits children and families to play a role in prevention. The school health initiative in which UNESCO and other United Nations organizations are involved represents an opportunity for improving the health of school-age children and teaching them about good health practices, as well as for using them to transmit this information within their homes. This initiative should be strongly supported by all collaborating organizations. Similar support should be provided to the PEEM capacity-building programme, which aims at improving environmental management by informing decision makers, training professionals in intersectoral cooperation and using agricultural extension programmes to inform the farming community.

104. The vital role of non-governmental organizations was referred to in paragraph 92 above. Their contributions in each country will vary but they represent an important resource, not only for emergency action but also in many countries as a source of health care which complements that provided by the Government and the private sector. United Nations organizations should ensure that these organizations, as appropriate, are included within the collaborative mechanisms they are promoting within countries.

105. Strengthening of disease surveillance, including early warning systems for malaria and cholera epidemics, is needed in most countries where these diseases persist and should be supported both by the specific disease-control programmes concerned as well as by organizations which support capacity-building within the health sector. An integral part of such efforts will be to strengthen response capabilities so that appropriate action results from the receipt and analysis of data. These systems have high relevance for other diseases of public-health importance, including HIV infection, tuberculosis, acute respiratory infection and vaccine preventable diseases such as measles and poliomyelitis. National surveillance systems are also the foundation on which regional and global monitoring systems are based, such as those being developed to monitor progress in achieving the goals endorsed by the World Summit for Children. Strengthening of disease surveillance is a special priority for WHO in its support to countries but should also become a greater priority for collaborative support to countries by other United Nations organizations.

106. In contrast to the overlap of technical specialists which sometimes occurs in United Nations organizations, severe shortages exist in most developing countries. This is particularly true with respect to malaria and other diseases of the tropics whose transmission depends on intermediate vectors such as mosquitoes (dengue, yellow fever, Japanese encephalitis and many others), sand flies (leishmaniasis) or snails (schistosomiasis). Entomologists are needed to identify the species of vector and its susceptibility to varying methods of control; epidemiologists are needed to consolidate that information with how best to reduce disease transmission among the groups most at risk from the disease; and specialist clinicians are needed to advise on treatment and monitor the effectiveness of available drugs. More concerted efforts on the part of United Nations organizations and endemic countries themselves to provide such expertise within national programmes is needed. The model provided by the Special Programme for Research and Training in Tropical Diseases, co-sponsored by UNDP, the World Bank and WHO, which reserves some 25 per cent of its resources for research capability strengthening in developing countries, is helping to address these needs. Similar activities are required in other relevant programmes.

107. The degree of medical specialization required for the prevention and control of diarrhoeal diseases, including cholera, is far less than is the case with malaria. Whilst it has been possible in recent years, with the collaboration of a number of United Nations organizations, including UNICEF and WHO, along with bilateral development agencies and non-governmental organizations, to markedly increase the technical capacities of country health staff to improve the availability and efficacy of treatment, this work needs to be continued and expanded, especially in the least developed countries.

108. Prevention of malaria and diarrhoeal diseases requires increased multisectoral collaboration. While collaboration can often be achieved in response to the stimulus of an epidemic of malaria or cholera, it is far more difficult to obtain the long-term investments in water, sanitation, food safety and other pertinent aspects of development which are required for long-term prevention of these diseases. All concerned United Nations organizations, WHO in particular, must therefore intensify their efforts to make epidemics of malaria and cholera opportunities for increasing longer-term investments rather than being a short-term drain on available resources. One approach is to integrate epidemic control within the sustained prevention and control programmes for malaria and diarrhoeal diseases, both of which in fact cause more deaths in endemic than in epidemic form, despite the drama and real suffering caused by epidemics. Investment in sustained programmes is sensible in itself and also ensures that national expertise is in place to provide an early and effective response to epidemics. 7/

109. Another approach to improved country-level coordination is the increased use of joint evaluations already being supported by UNICEF and WHO. This review process should be extended to malaria and other parasitic diseases. Further efforts are required to enlarge the representation from non-health sectors in such reviews, including representation from concerned United Nations organizations, such as FAO, the community, especially women, non-governmental organizations and the private sector.

110. One cannot escape the need for additional resources to address the prevention and control of malaria and diarrhoeal diseases. Review is required of how existing resources are being invested, and changes need to be instituted to ensure that they are being used optimally. For malaria in particular, a number of national programmes persist which were appropriate when eradication was the goal but are no longer cost-effective. Changes in these programmes have the potential for freeing resources and may avoid the need for increasing the level of current resources. With the adoption of the Global Malaria Control Strategy by the Ministerial Conference on Malaria (see para. 11 above), WHO, in collaboration with other organizations such as UNDP, UNEP, UNICEF, the World Bank, bilateral development agencies and non-governmental organizations, will renew its efforts to support countries in developing strategies adapted to their current requirements.

111. But in the least developed countries, the combination of environmental circumstances and lack of resources has meant that few effective national control programmes have been mounted. In these countries, few savings are possible, since programmes will largely need to be built up from the beginning. If effective and sustainable programmes are to result, additional resources, both from national and international sources, will be required.

112. More resources are needed, particularly in the least developed countries, to strengthen national programme management in the prevention and control of diarrhoeal diseases, in order to ensure that oral rehydration salts and appropriate antibiotics are available and that they are used appropriately by staff who are trained and supervised. A larger problem, however, is the additional investment needed in water, sanitation, food control and hygiene education to stop transmission in the environment and in the home of the pathogens responsible for diarrhoeal diseases, including cholera. Malaria

presents a similar problem for the larger investments required for prevention, including those related to industrial and agricultural development, where investments in planning are required so that development does not engender further disease burdens. The United Nations organizations concerned - FAO, UNDP, UNESCO, UNICEF, UNIDO, WFP, the World Bank and WHO - should increase their joint efforts to support Governments in analysing how both Government and United Nations organization resources could be best used to support sustainable national development and to ensure that their resources support this goal in a complementary manner.

113. The impetus for improved environmental management which has resulted from UNCED should help to reinforce the need for environmental impact studies to be conducted before developmental projects, particularly those relating to water-resource development, are undertaken, and to ensure that safeguards will be introduced in existing projects to prevent the spread of diseases such as malaria and diarrhoea. Past experience clearly indicates that the health and social sectors do not have the resources to remedy the ills resulting from unhealthy development. Healthy development must be financed by development projects themselves, with the technical support of the health sector. FAO and WHO bear, in their respective areas of concern, a special responsibility to promote multisectoral collaboration at the country level, in order to ensure that this does in fact happen.

114. The process of dialogue between Governments and United Nations agencies, bodies and organs, initiated at the current substantive session of the Economic and Social Council should be continued. The Secretary-General is invited to request the Director-General of the World Health Organization to act as task manager, in close collaboration with the organizations of the United Nations system most concerned, for the preparation of a report, to be presented through the Secretary-General to the Economic and Social Council at its substantive session in 1994, on the status of coordination in preventive action and intensification of the struggle against malaria and diarrhoeal diseases, in particular cholera.

Notes

1/ Provisional data provided by the Food and Agriculture Organization of the United Nations.

2/ The loss of welfare caused by any disease is properly measured by peoples' willingness to pay to avoid it. Though empirically difficult to determine, this sum will be greater than the estimates of illness cost produced through totalling the direct (attendance and treatment) and indirect (output losses) costs. The latter approach, which has been commonly used in the context of both malaria and diarrhoeal diseases, omits the subjective value people place on avoiding discomfort, pain and anxiety. Empirical work in related areas suggests that this is substantial in relation to the direct and indirect costs approach.

3/ Report of the United Nations Conference on Environment and Development, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8), resolution 1, annex II.

4/ Final Report of the International Conference on Nutrition, Rome, December 1992 (Food and Agriculture Organization of the United Nations and World Health Organization, 1992), Part II.

5/ See World Declaration on Education for All and Framework for Action to Meet Basic Needs (Inter-Agency Commission for the World Conference on Education for All, 1990).

6/ A/45/625, annex.

7/ One reason that the recent cholera epidemic in Peru and other countries of Latin America has had fewer than 1 per cent mortality, in contrast to the 5-10 per cent reported in epidemics in some countries of Africa, has been the advanced state of development of diarrhoeal disease-control programmes, including the use of oral rehydration therapy and appropriate treatment of cases seen at health facilities, and improved access to those facilities.

Annex

LIST OF ORGANIZATIONS COLLABORATING IN THE PREPARATION OF THE REPORT

Food and Agricultural Organization of the United Nations

International Labour Organisation

United Nations (Department for Policy Coordination and Sustainable Development and Department for Humanitarian Assistance)

United Nations Development Programme

United Nations Environment Programme

United Nations Educational, Scientific and Cultural Organization

Office of the United Nations High Commissioner for Refugees

United Nations Children's Fund

United Nations Industrial Development Organization

World Bank

World Food Programme

World Health Organization